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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/700,037	07/02/2001	Roger Timmis	WEYE116514	1285
26389	7590	06/20/2005	EXAMINER	
CHRISTENSEN, O'CONNOR, JOHNSON, KINDNESS, PLLC			LANKFORD JR, LEON B	
1420 FIFTH AVENUE			ART UNIT	
SUITE 2800			PAPER NUMBER	
SEATTLE, WA 98101-2347			1651	

DATE MAILED: 06/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/700,037

Applicant(s)

TIMMIS ET AL.

Examiner

Leon Lankford

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Applicant's arguments filed 3/21/05 have been fully considered but they are not persuasive. The claims remain rejected for the reasons of record.

The claims remain rejected for the reasons of record under 35 *USC* § 112 first paragraph because it does not appear that the claimed invention was in possession of the inventor or that the instant invention enables the claimed invention. The declarations have been considered but the declarations fail to overcome the shortcomings of the instant specification in enabling or showing possession of the claimed invention. Applicant has demonstrated that embryos have different raw digital images but not that unknown embryos can be selected using a classification model and shown to exhibit the "characteristic" for which they are selected.

It also follows that applicant is intending to show possession and enablement for generic claims to "quantifiable characteristics" however the specification does not contain an adequate description for the entire scope of this phrase and thus the claims. The written description requirement for a claimed genus may be satisfied through sufficient description of a representative number of species by actual reduction to practice, reduction to drawings, or by disclosure of relevant, identifying characteristics, i.e., structure or other physical and/or chemical properties, by functional characteristics coupled with a known or disclosed correlation between function and structure, or by a combination of such identifying characteristics, sufficient to show the applicant was in possession of the claimed genus. See *Eli Lilly*, 119 F.3d at 1568, 43 USPQ2d at 1406.

Further, applicant argues that the instant method employs "more than embryo perimeter data" but the majority of the claims contain no such limitation. Applicant's arguments have been considered however a showing to overcome a prima facie case of

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obviousness must be clear and convincing(In re Lohr et al. 137 USPQ 548) as well as commensurate in scope with the claimed subject matter (In re Lindner 173 USPQ 356; In re Hyson, 172 USPQ 399 and In re Boesch et al., 205 USPQ 215 (CCPA 1980).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 27-41 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Further, the claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Applicant has amended the claims to use “quantifiable characteristics” however the issue of description still remains. The examiner still contends after reading applicant’s arguments that applicant has not demonstrated that embryos selected by the classification method using the spectral data would demonstrate the same “quantifiable characteristic”, e.g. germination, and thus no correlation has been established.

Applicant claims a method for classifying plant embryo “according to their quantifiable characteristics,” yet within the specification as originally filed, there is no

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clear correlation drawn between the data collected and compared and the desired “characteristic,” i.e. the ability to germinate, of an embryo. Applicant has not clearly established what the correlation is and thus it is unclear that applicant actually had within their possession a method for actually classifying plant embryo quality.

Applicant theorizes that the raw spectral data analysis of embryo can be standardized such that a known desirable standard can be used to determine the desirability of embryos by analyzing the spectral data produced thereby, however this has not been demonstrated. The specification explains how to obtain raw data however the specification does not describe the claimed invention. Applicant has not described the invention in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. There is no description of how the data can be effectively used. The invention has not been adequately described.

It follows logically that the claimed invention has not been enabled by the instant specification because applicant has not taught how to classify embryos wherein the “spectral data” of an embryo is used as a standard to which embryos of unknown “characteristics” are compared wherein if the data matches(?) then the unknown is classified as having the same characteristic which would appear to be applicant’s invention. The specification shows no correlation between “spectral data” and desired characteristics but only between “the spectral data” of one embryo and “the spectral data” of a subsequent embryo.

It would appear that applicant is claiming that if an unknown embryo has the same “spectral data” as the reference embryo then it has the same desired

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“characteristic”, i.e. the ability to germinate, but applicant has not set forth how a different result is to be classified. Thus applicant has not described or enabled how to classify an embryo. What parameters or data would show that an embryo is of lesser desired characteristic? Greater desired characteristic? There appears to be no indication of how the reference and model are used to classify the desired “characteristic” of an embryo.

There appears to be no adequate description for the specific qualities applicant claims in claim 41. The specification appears to be speculative in the ability to use spectral data to classify/select an embryo with any or all of the claimed properties.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were

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made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 27-40 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Chi et al (*J of Fermentation and Bioengineering* Vol81(5)) and/or Vits et al (*AIChE Journal* Vol40(10)).

Chi and Vits teach collecting visual and spectral data from somatic embryos to quantify the morphology and thus the stage of the embryos. It is unclear if the reference reads directly on the claimed invention however where applicant's invention would read on visually or spectrally assessing the morphology of embryos and determining the stage of the embryo using algorithms, the references would anticipate the claim subject matter.

Wherein the invention is not anticipated, an invention different than the methods of the references of record because of a different mathematic means for comparing embryos would have been obvious wherein the algorithm used is a known statistical means for comparing similar types of data.

Wherein "quantifiable characteristic" could read on any data collected, the claimed invention would be clearly obvious because applicant's claim would call for the measuring of the spectral data of an embryo (1) and then measuring the spectral data of another (2) to see if they are the same and classifying the data (a quantifiable characteristic?) as the same for embryo 2 as embryo 1 if the numbers match.

Accordingly, the claimed invention was at least prima facie obvious to one of

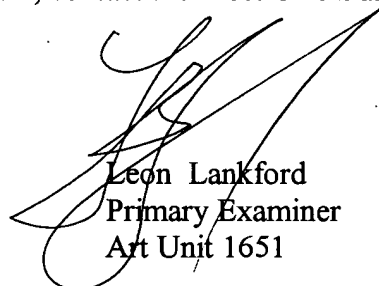
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ordinary skill in the art at the time the invention was made especially in the absence of evidence to the contrary.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leon Lankford whose telephone number is 571-272-0917. The examiner can normally be reached on Mon-Thu 7:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Leon Lankford
Primary Examiner
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LBL